What is claimed is:

1. A partially thio-modified aptamer that binds to a TGF-beta protein.

2. The aptamer of claim 1, wherein the TGF-beta protein comprises a human TGF-beta.

3. The aptamer of claim 1, wherein the TGF-beta protein comprises a TGF-beta dimer.

4. The aptamer of claim 3, wherein the TGF-beta dimer is a homodimer.

5. The aptamer of claim 4, wherein the TGF-beta homodimer is a TGF-beta 1, 2 or 3 homodimer.

6. The aptamer of claim 3, wherein the TGF-beta dimer is a TGFbeta 1, 2 or 3 heterodimer.

7. The aptamer of claim 1, wherein the aptamer comprises one or more thio-modifications as set forth in SEQ ID NOS: 4-22.

8. The aptamer of claim 1, wherein the aptamer is achiral.

9. The aptamer of claim 1, wherein the aptamer further comprises a detectable label.

10. The aptamer of claim 1, further comprising one or more pharmaceutically acceptable salts.

11. The aptamer of claim 1, further comprising a diluent.

12. A partially thio-modified aptamer that binds to a TGF-beta receptor.

13. The aptamer of claim 12, wherein the TGF-beta receptor is a signaling receptor.

14. The aptamer of claim 12, wherein the TGF-beta receptor is a co-receptor.

15. The aptamer of claim 13, wherein the TGF-beta signaling receptor comprises a human TGF-beta signaling receptor.

16. The aptamer of claim 13 wherein the TGF-beta signaling receptor comprises a TbetaRI or a TbetaRII receptor.

17. The aptamer of claim 13, wherein the target of the aptamer is the GS domain of a TbetaRI receptor.

18. The aptamer of claim 14, where the co-receptor is TGF-beta 3.

19. The aptamer of claim 12, wherein the aptamer is achiral.

20. A partially thio-modified aptamer that binds to a ligand-receptor complex comprising a TGF-beta ligand and a receptor complex comprising a TbetaRI and a TbetaRII receptors.

21. The aptamer of claim 20, wherein the target of the aptamer is the GS domain of a TbetaRI receptor.

22. The aptamer of claim 20, wherein the aptamer is achiral.

23. A partially thio-modified aptamer that binds to a ligand binding trap capable of trapping TGF-beta ligands.

24. The aptamer of claim 23, wherein the ligand binding trap comprises decorin, latency-associated protein (LAP) or alpha-macroglobulin.

25. The aptamer of claim 23, wherein the aptamer is achiral.

26. A partially thio-modified aptamer that binds to an auxiliary protein that promotes binding of TGF-beta ligand to Tbeta signaling receptors.

27. The aptamer of claim 26, wherein the auxiliary protein is a SARA protein.

28. The aptamer of claim 26, wherein the aptamer is achiral.

29. A partially thio-modified aptamer that binds to a Smad protein.

30. The aptamer of claim 29, wherein the Smad protein is an R-Smad, a Co-Smad, an I-Smad or a combination thereof.

31. The aptamer of claim 29, wherein the aptamer is achiral.

32. A partially thio-modified aptamer that binds to a TGF-beta protein complex and enhances TGF-beta activity.

33. The aptamer of claim 32, wherein the binding site of the aptamer on the TGF-beta protein complex comprises a region of a ligand binding trap protein.

34. The aptamer of claim 32, wherein the binding site of the aptamer on the TGF-beta protein complex comprises a region of an inhibitory I-Smad.

35. The aptamer of claim 32, wherein the aptamer is achiral.

36. A partially thio-modified aptamer that binds to a TGF-beta protein complex and inhibits TGF-beta activity.

37. The aptamer of claim 36, wherein the binding site of the aptamer on the TGF-beta protein complex comprises a region of an R-Smad or a Co-Smad.

38. The aptamer of claim 36, wherein the aptamer is achiral.

39. A partially modified thioaptamer that inhibits TGF-beta activity by binding to a TGF-beta ligand, a TGF-beta ligand-Tbeta receptor complex, a TGF-beta signaling receptor and co-receptor, to an R-Smad or a Co-Smad.

40. The aptamer of claim 39, wherein the aptamer is achiral.

41. A partially modified thioaptamer that modifies TGF-beta activity by binding to a TGF-beta ligand, a TGF-beta ligand-Tbeta receptor complex, a TGF-beta signaling receptor and co-receptor, to an R-Smad or a Co-Smad.

42. A method of inhibiting TGF-β activity comprising the steps of:

providing to a host in need of therapy a pharmaceutically effective amount of a thioaptamer that specifically binds to and inhibits TGF-β activity.

43. The method of claim 42, wherein the thioaptamer is provided to the host to ameliorate the effects of: fibrosis, scarring and adhesion during wound healing; fibrotic diseases of the lung, liver and kidney; atherosclerosis, arteriosclerosis; cancers including gliomas, colon cancer, prostate cancer, breast cancer, neurofibromas, lung cancer; angiopathy, vasculopathy, nephropathy; systemic sclerosis; viral infections accompanied by immune suppression (HIV, HCV); and immunological disorders and deficiencies (auto-immune diseases).

44. A method of quantitating TGF-β levels in a sample comprising the step of contacting a sample with a TGF-β-specific thioaptamer.

45. The method of claim 44, wherein the samples comprises a physiological sample.

46. The method of claim 44, wherein the sample comprise a blood, tissue, cells, supernatant, media.

47. The method of claim 44, wherein the TGF-β protein comprises a human TGF-β.

48. The method of claim 44, wherein the TGF-β protein comprises a TGF-β homodimer.

49. The method of claim 44, wherein the TGF-β protein comprises a TGF-β1, 2 or 3 heterodimer.

50. The method of claim 44, wherein the thioaptamer comprises one or more thio-modifications as set forth in SEQ ID NOS.: 4-22.

51. The method of claim 44, wherein the thioaptamer further comprises a detectable label.

52. The method of claim 44, wherein the thioaptamer further comprises a detectable detectable selected from the group consisting of a colorimetric, a fluorescent, a radioactive and an enzymatic agent.

53. A method of modulating TGF-β signaling comprising the steps of:

administering to a host a TGF-β specific thioaptamer that modulates the activity through the TGF-β receptor in a dosage effective to reduce activity of the TGF-β.

54. The method of claim 53, wherein the thioaptamer modulates the activity through the TGF-β receptor by increasing activity.

55. The method of claim 53, wherein the thioaptamer modulates the activity through the TGF-β receptor by decreasing activity.

56. The method of claim 53, wherein the thioaptamer is selected from the group consisting of SEQ ID NOS.:4-22.

57. A method of treating a pathological condition due to increased TGF-β activity comprising the steps of:

administering to a host an effective dosage of a thioaptamer that modulates TGF-β.

58. The method of claim 57, wherein the thioaptamer binds to TGF-β, the TGF-β receptor, a TGF-β auxiliary protein, a TGF-β ligand binding trap protein or a TGF-β Smad protein.

59. The method of claim 57, wherein the thioaptamer modulates the activity through the TGF-β receptor by increasing activity.

60. The method of claim 57, wherein the thioaptamer modulates the activity through the TGF-β receptor by decreasing activity.

61. The method of claim 57, wherein the thioaptamer is selected from the group consisting of SEQ ID NOS.: 4-22.

62. The method of claim 57, wherein the pathological condition comprises:

fibrosis, scarring and adhesion during wound healing; fibrotic diseases of the lung, liver and kidney; atherosclerosis and arteriosclerosis; cancers such as gliomas, colon cancer, prostate cancer, breast cancer, neurofibromas, lung cancer; angiopathy, vasculopathy, nephropathy; systemic sclerosis; viral infections accompanied by immune suppression (HIV, HCV); and immunological disorders and deficiencies (auto-immune diseases).

63. The method of claim 57, wherein the TGF-β specific thioaptamer is encapsulated.

64. The method of claim 57, wherein the capsule is degradable by an external stimulus to release the TGF-β specific thioaptamer.

65. The method of claim 57, wherein the external stimulus is selected from the group consisting of UV light, acid, water, in vivo enzymes, ultrasound and heat.

66. The method of claim 57, wherein the TGF-β specific thioaptamer is bound to a binding molecule.

67. The method of claim 57, wherein the TGF-β specific thioaptamer is bound to a binding molecule and further comprising the step of detaching the binding molecule from the TGF-β specific thioaptamer.

68. A method of treating a pathological condition in which increased TGF-β activity has been implicated comprising the steps of:

administering to a host a TGF-β specific thioaptamer in a pharmaceutically acceptable carrier at a dosage effective to reduce TGF-β activity.

69. The method of claim 68, wherein the pharmaceutically acceptable carrier is selected from the group consisting of a cream, gel, aerosol and powder for topical application.

70. The method of claim 68, wherein the pharmaceutically acceptable carrier is selected from the group consisting of a sterile solution for injection, irrigation and inhalation.

71. The method of claim 68, wherein the pharmaceutically acceptable carrier comprises a sterile dressing for topically covering a wound.

72. The method of claim 68, wherein the pharmaceutically acceptable carrier is selected from the group consisting of a biopolymer and a polymer for implanting within a wound.

73. The method of claim 68, further comprising the step of administering a growth factor other than TGF-β.

74. The method of claim 68, wherein the TGF-β specific thioaptamer is encapsulated.

75. A method of modulating TGF-β signaling comprising the steps of:

administering to a host a TGF-β ligand binding trap specific thioaptamer that modulates the activity through the TGF-β receptor in a dosage effective to reduce activity of the TGF-β.

76. A method of modulating TGF-β signaling comprising the steps of:

administering to a host a TGF-β auxiliary protein specific thioaptamer that modulates the activity through the TGF-β receptor in a dosage effective to reduce activity of the TGF-β.

77. A method of modulating TGF-β signaling comprising the steps of:

administering to a host a TGF-β Smad protein specific thioaptamer that modulates the activity through the TGF-β receptor in a dosage effective to reduce activity of the TGF-β.